ABSTRACT

Methods and apparatus, including computer program products, for maintaining a database, including maintaining a collection of documents containing content, each of the documents including a hyperlink to another document and represented by a unique logical information object (LOIO), each unique LOIO pointing to one or more physical information objects (PHIOs), each of the PHIOs containing a variant of the content of a document, the variant being one of more attributes and determining a suitable PHIO when a LOIO is response to a request.